ENHANCING THE RESPONSIBLE AND SUSTAINABLE EXPANSION OF THE SCIENCE SHOPS ECOSYSTEM IN EUROPE

D5.5

End users feedback report and optimisation

Project

Acronym: **SciShops.eu**

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Consortium: **SYNYO GmbH (SYNYO)**, Austria

Handelsblatt Research Institute GmbH, Germany

University of Hohenheim, Germany

KPMG Limited, Cyprus

The National Unions of Students in Europe, Belgium

Institute of Social Innovations, Lithuania

University of Oxford, United Kingdom

Katholieke Universiteit, Belgium

Universidad Carlos III De Madrid, Spain

Universitatea Politehnica Din Bucuresti, Romania

Universitá Degli Studi Di Brescia, Italy

Universiteit Leiden, Netherlands

International Center for Numerical Methods in Engineering, Spain

Institute Jozef Stefan, Slovenia

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Vetenskap & Allmänhet, Sweden

Bay Zoltán Nonprofit Ltd. For Applied Research, Hungary

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Executive summary

Quality of the services provided within the SciShops Web Platform is essential for the acceptance and employment of the developed software components. This report analyses, assesses and addresses issues in performance, usability and task suitability in a first iterative cycle. Identified issues, taken optimization measures and generated improvements are reported in this deliverable.

Table of Content

1   Introduction

The evaluation of the SciShops Web Platform is an important phase of its development cycle. The main objective of this end user feedback report is to evaluate the SciShops Web Platform readiness for release by testing it, in this first iteration, with the members of the SciShops Project Consortium as real users who are part of the target audience.

This first feedback round has been conceived for involving at least one person from each of the 13 SciShops Partners Organizations (SYNYO, KPMG, Institute of Social Innovations, UOXF, KU Leuven, UC3M, BZN, UPB, UNIBS, JSI, Wuppertal Institute, VA and BZN) that have a Science Shop already stablished or envisages to have its own Science Shop by the end of the project.

The second section of this deliverable contains the objectives, methodology and design of the survey, the third section summarizes the answers reported by the users, and finally, the fourth section is a compendium of a set of recommendation for updating on the platform based on the users' reported experience.

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2   Methodology for SciShops Web Platform On-line Questionnaire-Based Survey

2.1.   Objectives

The main objective of the performance, usability and task suitability survey contained in this deliverable is to evaluate the SciShops Web Platform readiness for release by testing it, in this first iteration, with the members of the SciShops Project Consortium as real users who are part of the target audience. The survey evaluated the overall user experience by measuring the relative ease with which end users can accomplish a set of tasks that a typical user of the web platform would need to accomplish.

The goal is to understand how real users interact with the web platform and to propose a list of recommendations based on the results to updating them on the platform. The primary purpose of the survey is to gather the data needed to identify usability issues and improve the SciShops web platform design.

A set of questions was constructed for users to evaluate a set of tasks and expectancies like adding a new Science Shop to the platform or rating in a scale from 1 to 10 their overall experience following the methodology detailed in the next section.

2.2.   Methodology

The evaluation of the SciShops Web Platform is an important phase of the development cycle, specially these days where web platforms are envisaged for deployment of complex applications of increased interactivity, a front end for databases and information systems. This increases the importance of usability, as the web platform is used for accomplishment of complex tasks, like learning, retrieving information, interacting and collaborating with peers[1].

This first feedback round has been conceived for involving at least one person from each of the 13 SciShops Partners Organizations (SYNYO, KPMG, Institute of Social Innovations, UOXF, KU Leuven, UC3M, BZN, UPB, UNIBS, JSI, Wuppertal Institute, VA and BZN) that have a Science Shop already stablished or envisages to have its own Science Shop by the end of the project.

In this paper, the results of the Scishops Web Platform usability testing are reported in section 3. These were based on an experiment involved on-line questionnaires, extensively applied in usability evaluation experiments[2,3], filled by the users. The optimization measures following these evaluation studies are also described in section 4.

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[1] Shum S. B. (1996)
[2] Feinberg S. and Johnson P.Y (1998)
[3] Kantner L. and Rosenbaum S. (1997)

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2.3. Online Questionnaire-Based Survey

On-line questionnaires are particularly useful in web platform usability evaluation when the users are distant[4]. The questionnaire contained a number of simple questions requesting the view of the users on the quality of the provided services and the utility of the SciShops Web Platform. The Google Forms service[5] was used for compiling the questionnaire and analysing the responses. The questionnaire was made of four parts. The first part requested the user expectations towards the SciShops Web Platform and previous users' experience with any other platform related with Science Shops (Figure 1).

Figure 1: Customer User Interface Experience Survey: Sections Expectations and Accessibility and Visualization.

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[4] Avouris N. et al. (2002)
[5] https://www.google.com/forms

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The second part requested the view of the users in relation to the accessibility and quality of the application (ease of navigation, aesthetic design, quality of content and usefulness of services) as shown in figure 1.

The third part, Figure 2, requested the devices users mostly use for access to the platform and the specific error that they may find (devices used to visualize the content, problems with log in and registration procedures, unexpected behaviour, visualization problems, etc.).

Figure 2: Customer User Interface Experience Survey: Section Problems and Errors.

The fourth part contain the overall users' opinions about how useful the platform is or about the most useful services provided by the platform (Figure 3). Some of the requested answers of the questionnaire were expressed in a multi-point scale ranging from 1 (inadequate) to 5 (excellent) or from 1 (inadequate) to 10 (excellent) in order to rate the overall users' experience. No specific suggestions were made to the users to fill the questionnaire.

Figure 3: Customer User Interface Experience Survey: Section Overall Opinion.

3   Performance, usability and task suitability assessment

3.1.   Users Expectations

Managing user expectations is a key challenge for a successful project implementation. If the SciShops Web Platform is perceived as over-promised and/or under-delivered, then users will be unsatisfied with the resulting solution, thus jeopardizing its future adoption. Balance expectations is important to counter this risk. Figure 4 shows the results of the survey concerning this issue. Most of partners' expectations lies on promoting their own SciShops and to get to know other ScienceShops. Others expectancies expressed are linked to participate in SciShops related projects, promote NPOs or match questions with researchers. In general, as Figure 5 shows, mostly users have no experience using other SciShops Web Platforms excepting Living Knowledge platform that is the only one that those that have previous experience has used.

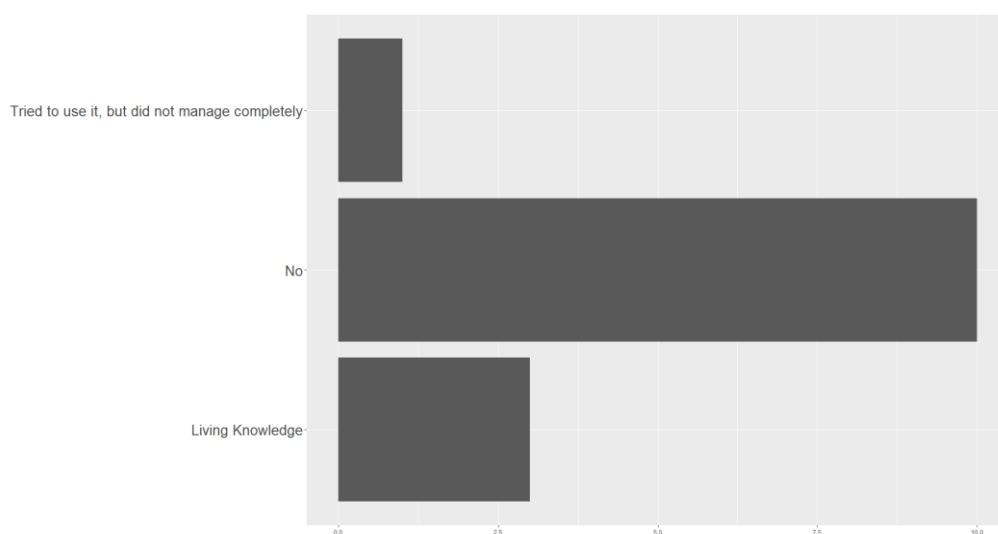**Figure 4: Question 1. What are your SciShops Web Platform expectations?**

Figure 5: Question 2. Have you used any other platform related with Science Shops before?

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3.2. Accessibility and visualization

The second part of the survey tried to obtain the perception of the users in relation to the accessibility and quality of the application. As Figure 6 shows, mostly users had no difficulties on adding new Science Shops. Few of them didn't understand what the question was asking, and one user found difficulties to find examples of how specific local community have been solved through Science Shops. But in general, at the time the survey was filled, users found the specific content they were looking for.
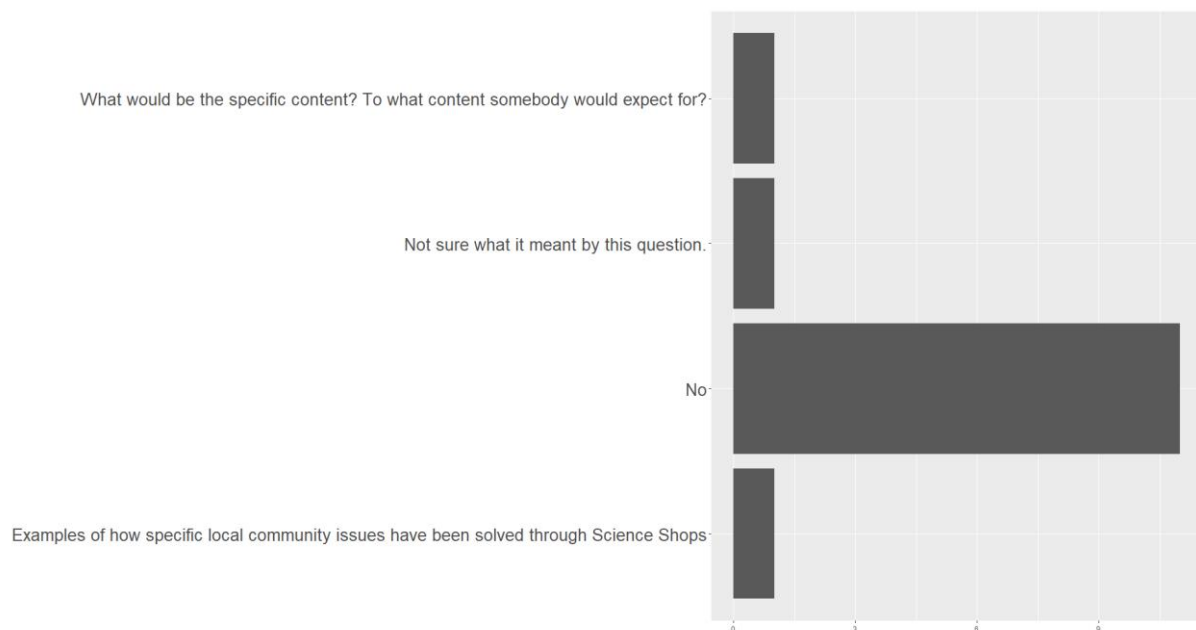
Figure 6: Question 3. Have you had any difficulties finding specific content?

Next question was related to the difficulties that users had experienced on adding new Science Shops into the platform. Users found difficulties in some different ways. As Table 1 shows, some users had problems uploading photos in New Science Shops profiles. Other users that would like to add a participatory research organization, but with a different description than a Science Shop, had problems with defining and describing their own organizations. Other users found problems related to how they should have filled some text boxes for providing information about the user itself or the New Science Shop they would like to add to the platform or to understand how they could have filled properly some information such as those related with funding and funders. Users had problems for checking if the information they provided were properly added or for replacing some contact information details such as email address or the name of the Science Shops. Finally, some users found problems to find in the platform the new Science Shop created.

Question 4: Have you had any difficulties on adding new Science Shops?
Problems uploading photos.
Problems with defining and describing participatory research organizations that are not a Science Shop.

Not very clear which information go to user and which to Science Shop when adding a new Science Shop.
Problems with the logo photo size.
Problems for checking if all the contact details has been properly added.
Problems finding on the platform the new Science Shops created.
Difficulties to understand the meaning or how some text boxes should be properly filled. For examples difficulties to understand the difference between "Funding" and "Funders". Recomendations to change the tittle of some fields such as including "Name of research institute" rather "name of science shop" and replacing open text field by operation mode rather single choice to avoid confusion.
Problems replacing the emailaddress or the name of the Science Shop.

Table 1: Summary of the users' answers related to Question 4.

The question related with twinning a Science Shops, as Figure 7 exposes, shows that most users had not tried to do that. One user didn't find any problem at all, and other one had problems with the editing tool after twinning with a Science Shop.
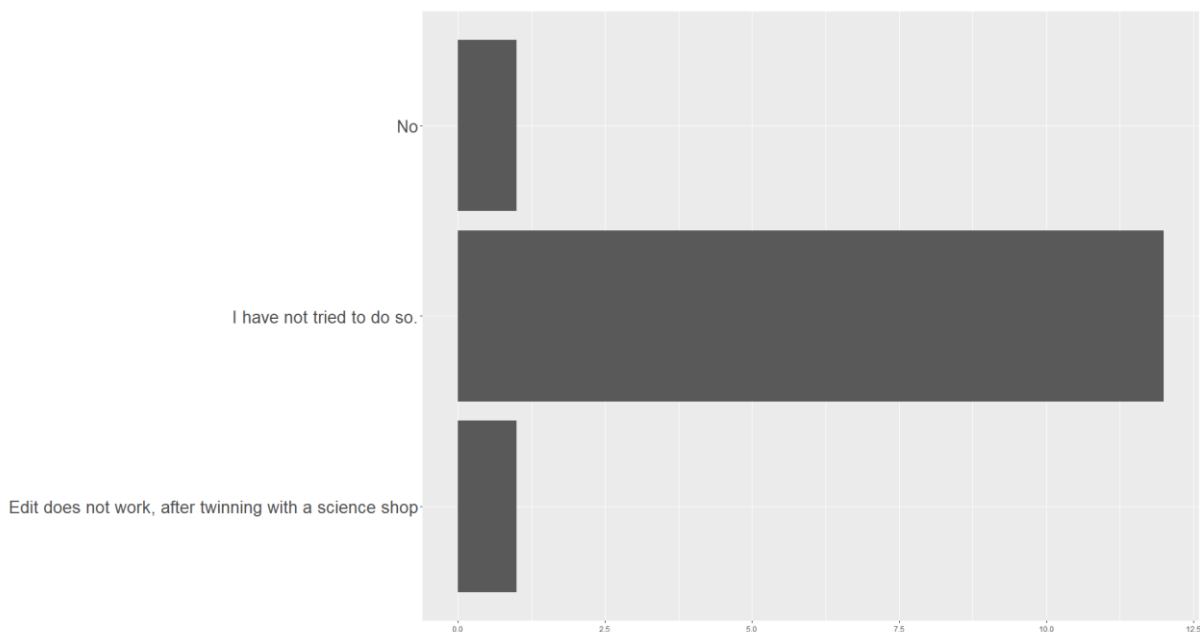
Figure 7: Question 5. Have you had any difficulties on twinning a Science Shop?

When users were asked about if they had any difficulties on claiming a Science Shops (Table 2) most of the users answered that they did not tried to do that. Those users that tried reported some problems with the Search Engine, specifically with the method used for presenting the information. Other users have doubts about the added value of claiming on a Science Shop.

Question 6. Have you had any difficulties on claiming a Science Shop?
There are too many listed, search does not really work.
Added value of claiming is not clear

Table 2: Summary of the users' answers related to Question 6.

The questions related with the used language expose that all of the users were familiar with the language of the platform (English) and in general all of them agreed that English is enough for them as the available language for the platform. However, one user points out that for promoting Science Shops at national level, it would be useful, if at least a limited page could be available in as many languages as possible.

Figure 8 shows how users rates, from 1 to 5, their perception about the design of the used theme and most of them agreed that the design could be improved.
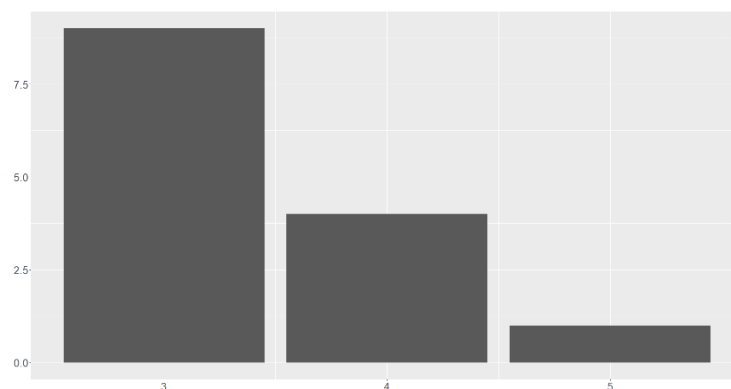
Figure 8: Question 9. Rating from 1 to 5 the design of the used theme.

Figure 9 shows how users rate, from 1 to 5, their perception about the distribution of the website's content. Most of them rating this aspect as good enough (3 scores), and almost the same users rating it as good (4 scores) and only one user rates it below 3 scores. That indicates that the content distribution could also be improved.
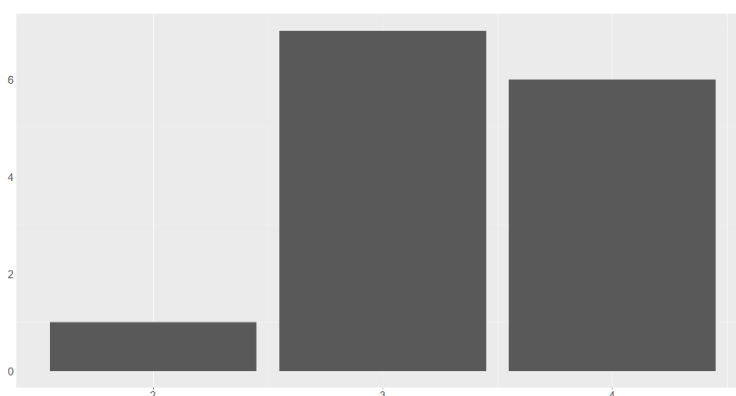
Figure 9: Question 10. Rating from 1 to 5 the distribution of the website's content.

3.3. Access devices and SciShops Web Platform problems and errors

The third part of the survey requested about what devices users mostly use for access to the platform and the specific errors that they may find using the SciShops Web Platform.

Concerning the registration process, as Table 3 exposes, most of the users didn't found any problem but those that found it point out that the registration step could be improved in order to make it easy. Some users had doubts at the time to fill the registration form and found problems trying to change the organization name after registration. Removal procedure seemed misleading and problems of receiving the verification link during the registration process were registered.

| Question 11. Have you experienced any problem in the Log In/Registration procedure? |
|---|
| Very tricky to follow the several registration steps. |
| Doubts concerning how to fill some registration text boxes such as the Organisation Name. |
| Problems trying to change the organization name after registration. |
| Account removal procedure misleading, as it is blocking the initial email and making re-registration impossible. |
| Problems at the time of receiving the verification link during the registration process. |
| Photos and some other data do not seem necessary – Their purpose is not comprehended. |

Table 3: Summary of the users' answers related to Question 11.

Problems experienced while using the website where reported previously in other questions but Table 4 emphasises errors such as that while editing twinning with Science Shops leads to a broken link and or the problems previously reported uploading photos to the platform.

Question 12. Have you experienced any problem (broken link, unexpected behaviour, etc.) while using the website
Editing twinning with science shops leads to broken link.
Problems uploading photos.

Table 4: Summary of the users' answers related to Question 12.

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As Figure 10 shows, question 13 reported that most of the users used a Computer to visualize the website and only one combing both computer and Mobile phone.
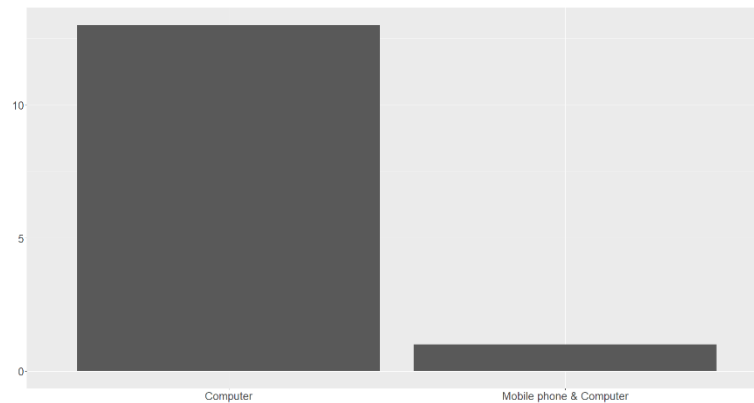
Figure 10: Question 13. What devices have you used to visualize the website?

Finally, any users experienced any visualization problem such as contents overlapping or text size during their navigation through the platform.

3.4. Overall users' opinion

The fourth section contained the overall users' opinion about SciShops Web Platform. Figure 11 exposes the overall users' experience with the SciShop Web Platform, and though, a considerable portion of users rate their experience as 7 or above, some of them consider that the overall experience could be improved.

Figure 11: Question 15. Rating from 1 to 10 the overall experience with the ScienceShop Web Platform

However, as Figure 12 shows, though one user is not confident at all about the platform usefulness, most of them considers that it is and probably their perception could be improved updating the platform after collecting their opinions throw this survey.
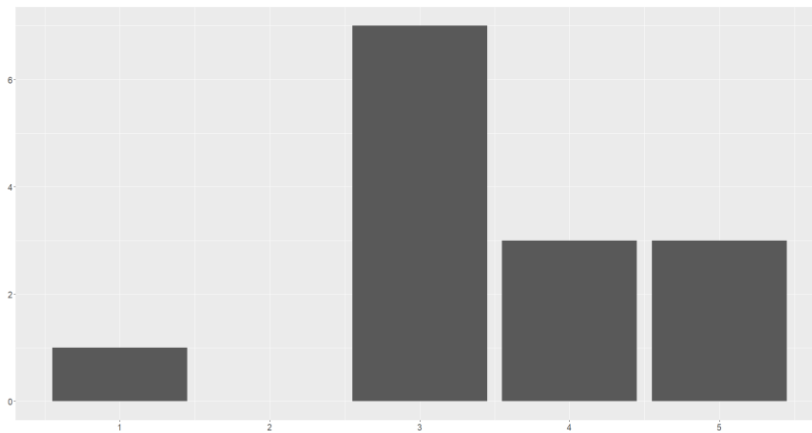
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Figure 12: Question 16. Rating from 1 to 10 how useful this platform is.

And most of the users, as shows Figure 13, would recommend the SciShops Web Platform to their colleagues.
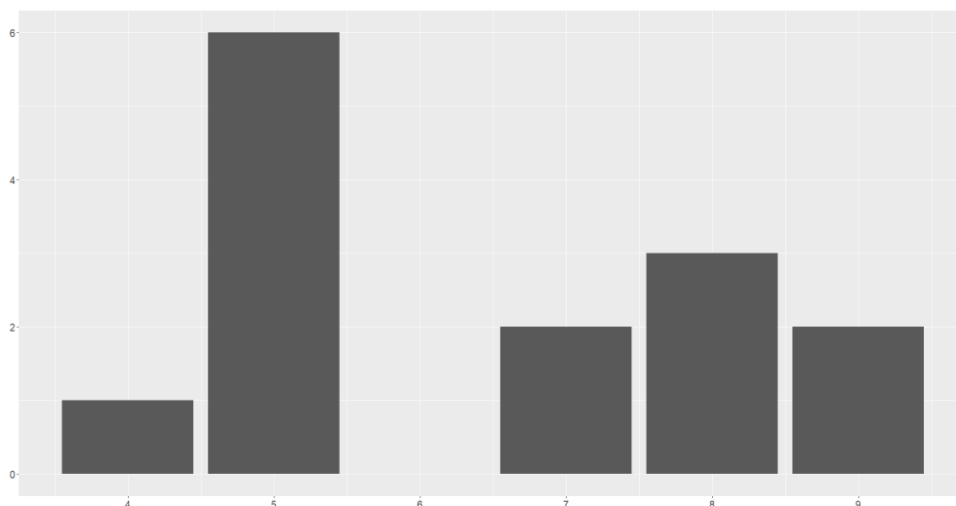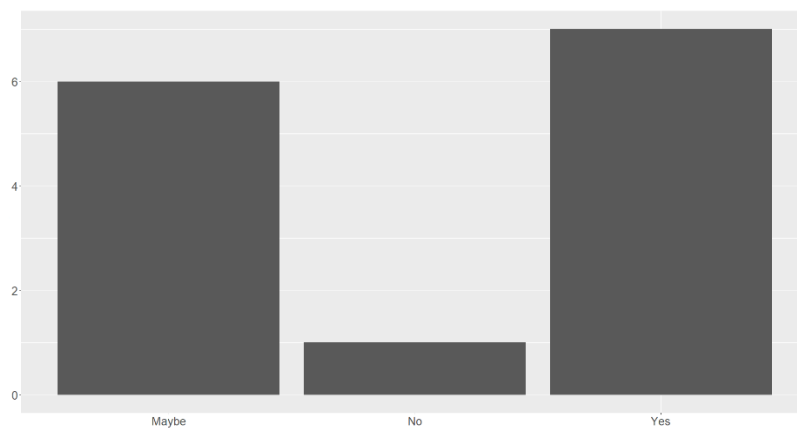

Figure 13: Question 17. Would you recommend SciShops Platform to your colleagues?

Finally, as it is exposed in Table 5, the most the users like about the platform is that the platform is user friendly at the time to insert the content, the theme and the mode as the Science Shops are organized inside the platform, the usefulness itself and some functionalities such as the possibility on claiming a Science Shop or finding or the Science Shops included in the platform in one single page.

Question 18. What did you like the most?
Nice design.
It's user-friendly to insert the content.
The theme and the way all Science Shops are organised.
Usefulness of platform.
Claim a Science Shop.
Overall user interface is clear.
Finding all these science shops on one page.

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Table 5: Summary of the users' answers related to Question 18.

And Table 6 shows the users recommendations in order to improve their own experience, and though most of them said that the web platform is fine as it is, some of them said that the experience could be improved making more clear the role of all partners giving more choices than "Science Shop" at the time to include the organization in the registration form, providing help for photo uploading, providing more information in the registration form specifying what content should be related to the user information and what content should be related to the Science Shops. Some users recommended some new functionalities such as adding a search bar when looking up the Science Shops and adding a database for research questions and to match them with the Science Shops that better fits with them.

Question 19. What can we do in order to improve the experience?
The platform is fine as it is.
Make more clear the role of all partners by giving more choices than "Science Shop".
Help with the logo photo size.
Be more clear about how the users profile and Science Shops profiles should be provided.
Providing more information to give an incentive to contribute and stay on the platform; added value for user should be clear.
To have photos for all links related to the events in the HOME page.
Add a search bar when looking up the Science Shops. Adding a database for research questions and to match them.

Table 6: Summary of the users' answers related to Question 19.

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4 Recommendation for updating on the platform

4.1. Recommendation on users' expectations

Meeting user expectations normally delivers good usability. Based on the survey results explained in previous sections, most users expect to promote their own Science Shops and to get to know other Science Shops. A quick starting guide about how to do that using the Science Shop Web Platform could help to achieve the users' goals especially of those, the majority, that have no previous experience using similar platforms.

A Frequently asked question hubs (FAQ pages) could help succinctly and appropriately respond to the needs of the users. It may help users to get their intended destination faster by removing knowledge (informational and often trust) barriers that are in place.

An effective FAQ resource can educate, inform and guide the user in a natural way through the website's content and toward their goals.

4.2. Recommendation on accessibility and visualization

Accessibility and visualization regards on the perception of the users in relation to the accessibility and quality of the application. Table 7 includes the recommendations on updating the platform on these issues following the users' opinions reflected in the survey results.

Recommendation on accessibility and visualization
Make it easier finding examples of how specific local community problems have been solved through Science Shops Web Platform adding a search bar for this purpose.
Improving the wizard for uploading photos to the platform.
Improving the registration process allowing different profiles beyond Science Shops defining and describing their organizations.
In the registration process, providing additional information about how it is expected that the users fill the text boxes.
Providing mechanisms to check and modify the information provided such as visualizing these information in the users and Science Shops profiles and allowing the possibility to change them at the users' convenience.
Creating Users and Science Shops Profiles that make it easier the access at their own Science Shop.
Improving the search engine specifically for visualizing the Science Shops search results.
Allowing the possibility to make available the Science Shop page in as many languages as possible.

Table 7: Summary of recommendation on accessibility and visualization

4.3. Recommendation on solving current problems and errors

This section will provide recommendation on solving current problems and errors that the users had to face with. These recommendations are provided in the Table 8.

Recommendation on solving current problems and errors
Improving the registration step including how to face it in the quick start guide, simplifying the process and providing information about how to fill the different steps.
Improving the registration process guaranteeing that the users receive the verification link properly.
Improving the removal procedure verifying that the actually the content has been removed.

Table 8: Summary of recommendation on solving current problems and errors

4.4. Overall recommendations

This section includes overall recommendation about the Science Shops Web Platform based on the users' opinion.

The overall perception of the users could be improved updating the platform on the provided recommendations that could be consulted in the previous sections. Users emphasises the necessity to improve the registration process, giving more choices at the time to register the type of organization going beyond Science Shops option, improving the verification mechanisms to be sure that the registration link has been provided, providing help to fill the content and uploading photos and images or adding new functionalities such as adding a search bar when looking up the Science Shops and adding a database for research questions and to match them with the Science Shops that better fits with them.

5   Next Steps: A second iterative cycle

This first iterative cycle has measured the quality of the services provided within the SciShops Web Platofrm and the acceptance and employment of the developed software components within the members of the consortium. Then a compendium of recommendations has been reported for improving the platform.

The next steps on this direction will consist on the implementation of the optimization measures in the SciShops Web Platofrm. Then, the survey will be slightly adapted for a second iterative cycle involving a wider Science Shop Community, together with an invitation to register and test the platform. Finally, the outcomes of this second iterative cycle will be reported in "*D.5.6. End users' feedback report and optimisation 2*".

6 References

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